

Name: _____

Socratic Seminar Prep

Teacher: _____

Algebra Pd: _____

Day

Month

Year

Question: Is it right for math teachers to give partial credit for incorrect answers on assessments?

1. First, Honest Reaction: Circle one: YES NO

2. Write at least two sentences explaining your answer above:

3. Scenario One: Al solves the equation: $2x - 4 = -8$ in the following way:

$$\begin{aligned} 2x - 4 &= -8 \\ x &= 2 \end{aligned}$$

The question is worth 5 points of a 20 point quiz and the teacher awards Al 0 out of 5 points. Do you agree or disagree with the teacher's assessment? Explain.

4. Scenario Two: Martin solves the equation: $2x - 4 = -8$ in the following way:

$$\begin{array}{r} 2x - 4 = -8 \\ + 4 \quad +4 \\ \hline 2x = -4 \\ 2 \quad 2 \\ x = 2 \end{array}$$

The question is worth 5 points of a 20 point quiz and the teacher awards Martin 0 out of 5 points. Do you agree or disagree with the teacher's assessment? Explain.

5. Scenario Three: Construction began on a transit center in Silver Spring, MD, in 2008. The transit center now provides access to Metro rail, Metro bus, and Amtrak. However, the project was delayed for over five years. One of the delays was caused by an engineer's mathematical error. This engineer stated that the structure needed a certain amount of concrete for the structure's reinforcement bars on the upper deck - he was wrong; his amount was less than what was actually needed. The construction crew caught the error when *the concrete began flaking off*. This delay was one of a few issues that cost over \$50 million taxpayer dollars.

a) Do you think this engineer should be awarded "partial credit" for his concrete calculation?

Circle: YES or NO

b) What could the engineer have done to prevent this error (which caused loss in materials, money, and time)?

c) What consequences should this engineer receive?

6. Scenario Four: "Investigators said Monday that the Interstate 35W bridge in Minneapolis, which collapsed into the Mississippi River on Aug. 1, 2007, killing 13, came down because of a flaw in its design. The designers had specified a metal plate that was too thin to serve as a junction of several girders, investigators say. The bridge was designed in the 1960s and lasted 40 years. But like most other bridges, it gradually gained weight during that period, as workers installed concrete structures to separate eastbound and westbound lanes and made other changes, adding strain to the weak spot. At the time of the collapse, crews had brought tons of equipment and material onto the deck for a repair job."

(New York Times, January 15, 2008)

Free Response: Write at least five sentences in response to this article. Be sure to reference our main topic question.

7. Scenario Five: A math student takes a test and turns the test in fifteen minutes early. He does not check his work, and makes some careless errors on three questions. The student earns a 90 A- because the teacher did award him partial credit for these errors. If the teacher had marked the three questions completely wrong and given no partial credit, the student would have received a 75 C. On the next test, the student turns the test in early again and does not check his work.

Free Response: Write at least four sentences in response to this scenario. Be sure to reference our main topic question.

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8. After completing this packet, answer the question again (Note: your answer can be the same.)

Circle one: YES NO